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PRIVATIZATION OF AGRICULTURAL INPUT SUPPLY
CONSTRAINTS AND OPPORTUNITIES FOR REFORM

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EXECUTIVE SUMMARY

The Agenda for Action in Agricultural Credit

The successes achieved in the Small Farmer Production Project (SFPP) have paved the way for rapid progress in a follow-on agricultural credit project. The SFPP has demonstrated that higher interest rates will be willingly accepted by farmers, that increased availability of inputs and technical assistance can lead to higher production by small farmers, and that medium-term loans can be made successfully based on the viability of the enterprise rather than collateral.

The SFPP approach can and should be extended rapidly beyond the pilot scale into full implementation. Certain changes in the SFPP model are critical: the expansion must place greater reliance than the SFPP on private supply of inputs, on cash rather than in-kind credit, and on farmer decision-making rather than centrally determined (albeit improved) packages.

The momentum generated by the SFPP provides an opportunity to make further progress toward transforming PBDAC from an implementing agency for state input supply and control programs into an effective credit institution. The overall aim for the next five years should be to:

Create the preconditions for separation of input supply and credit and dismantling of the agricultural control system by: 1) assisting PBDAC to place credit operations on a financially sound basis and 2) opening up input supply to the private sector.

Privatization of input supply is closely connected to both expansion of the SFPP and reform of PBDAC's credit operations. Farmers cannot use credit effectively without better access to inputs and greater choice in what they purchase, but PBDAC cannot supply credit on this basis unless its credit operation is improved and its financial dependence on commissions from input distribution is ended.

Constraints to Privatization

The existing PBDAC system ensures that the private sector will have only a marginal role in input supply, because PBDAC itself supplies nearly all of the purchased inputs used by the farmers. Private competition with PBDAC is illegal for many inputs, notably fertilizer, and impossible in many others, since they are provided at subsidized prices. The first requirement for development of a private sector input supply system is therefore a reduced role for PBDAC. This must be achieved gradually, to allow PBDAC to make needed internal reforms and to permit a private sector network to develop where only fragments currently exist.

Even if PBDAC were to disappear overnight, existing regulations on importation and, in particular, retail prices make it impossible

for private suppliers to operate profitably under current market conditions, except through black market operations. Removal of these policy constraints is a precondition to rapid private sector growth.

The input subsidy and output procurement system will complicate privatization, but does not constitute an insuperable barrier. Although reform in the agricultural control system is desirable, it need not necessarily be a precondition to privatization, particularly if AID resources can be brought to bear to ensure smooth functioning of the market despite these constraints.

Credit and access to technology are not currently binding constraints on private sector development.

Essential Elements of a Privatization Program

Capitalization of PBDAC and expansion of the SFPP are merited only if real progress toward privatization of input supply is part of the package. PBDAC's effectiveness as a credit institution and the SFPP's effectiveness in promoting technological progress on-farm depend equally on separation of the credit and input supply functions. Privatization of input supply will be a difficult task, and will face serious opposition from PBDAC, parastatal input companies, and elements of the private sector that benefit from the status quo. Necessary developments in both public and private sector institutions will require a minimum ten-year period. Before joining in this process, and committing funds to support it, AID must be assured that the GOE is genuinely committed to it and willing to fight the internal battles that must be fought.

Based on such an assurance, AID should proceed to develop and implement an initial five-year program consisting of:

1. Capital support to PBDAC in return for deregulation of importation and internal trade in major inputs; and
2. A pilot test in one governorate of methods for transferring input supply from PBDAC to the private sector, focusing on the retail level; and
3. Expanded use of private sector suppliers to provide goods and services to PBDAC under contract.

Rapid action by the mission should permit an initial obligation to begin this program in FY1986. The most urgent requirement is an immediate initiation of dialogue with appropriate GOE officials, in order to reach agreement on a set of policy reforms to be implemented prior to major obligation of funds in FY87. This dialogue must involve the Ministry of Agriculture and the PBDAC, but the primary participants will be in the central ministries, particularly Trade, Supply, and Finance.

A minimum set of policy reforms includes:

1. Removal of retail price controls on unsubsidized agricultural inputs (revision of Decree 119 of 1977); and
2. Removal of MOA approval on the quantities of approved agricultural chemicals that can be imported (reform of the Committee for Setting Private Sector Needs in MOA).

A more ambitious set of policy reforms would include:

1. Legalization of private importation and/or domestic trade in fertilizer (by MOA decree, but requiring higher approval);
2. Legalization of private importation and/or domestic trade in pesticides used on cotton (also by MOA decree);
3. Reduction of tariffs on all agricultural inputs (including pesticides in small packages and spare parts for agricultural equipment) to less than 10%; and
4. Removal of controls on importation of tractors (Supreme Council for Mechanization in MOA).

Although many of these changes will take the form of an MOA decree, few if any can be approved by the MOA acting alone. The dialogue must involve senior personnel on both sides of the table. The mission's ability to carry this dialogue forward to rapid agreement on substantive changes will be the primary determinant of success in beginning the privatization process.

I. The Existing System for Input Distribution

The current system for distribution of agricultural inputs is composed of two systems, operating in near-total isolation from each other. The formal distribution system relies heavily on the a parastatal organization, the Principal Bank for Development and Agricultural Credit (PBDAC), which serves as the operational arm of the government's extensive system for managing the production and marketing of key crops and other products. The PBDAC is the sole authorized source of virtually all the intermediate inputs used in agricultural production, including seed, pesticides, fertilizer, and livestock feed. Although other parastatal institutions also participate in this system (producing seed on state farms, for example), PBDAC is the central agency responsible for implementation of all marketing activities, and therefore this system will be referred to in this report as the PBDAC system.

The main elements of the PBDAC system are:

- a. The Principal Bank itself, which is responsible for procurement and oversight of the system;
- b. The 17 Governorate Banks or BDACs, which are responsible for handling distribution within their governorates;
- c. The district depots (shonas) operated by the BDACs under the management of the branch banks; and
- d. The 5000 village agencies (mandubiyas) operated by the 750 Village Banks, which carry out the actual distribution of inputs to the farmer according to established formulae.

Parallel to the PBDAC system is the informal distribution system, through which inputs produced on-farm (especially seed and livestock feed) are marketed within the agricultural sector. Information on this system is almost entirely lacking.

There is also a small private commercial system. Although the limited evidence available indicates that this system is expanding rapidly, it can best be described at the present time as rudimentary. The reasons for this are further explored below.

The following discussion focuses on the PBDAC system and the small formal private sector. Given the limited time available for production of this report, it has been necessary to focus primarily on the inputs for crop production, rather than livestock, although the systems are largely similar. Although the discussion will not explicitly treat the informal sector, the presence and importance of local trade in agricultural inputs and outputs should be borne in mind. A more complete discussion of the PBDAC input distribution system and its relation to agricultural controls may be found in Annex 1 to this report.

A. The Principal Bank for Development and Agricultural Credit

The Principal Bank has undergone a number of major reorganizations in the 55 years since its establishment in 1931. Of these, the most significant was carried out in the late 1970s, when the input distribution, crop marketing, and credit functions were returned to the Bank following the failure of the state-sponsored cooperatives to manage these functions effectively. Under Law 117 of 1976, the Bank resumed these functions, assuming as well a large part of the personnel, physical facilities, and debt of the cooperative system. Bank operations were extended to the village level with the creation of a network of Village Banks, now numbering 750. The PBDAC system is further described in the separate credit report accompanying this study of the input market.

1. PBDAC Responsibilities in Input Distribution

Under existing policies, the major inputs required for crop production are provided to the farmers at subsidized prices. PBDAC is the monopoly supplier of these inputs, which are made available on the basis of the farmer's individual crop plan in quantities specified by the Ministry of Agriculture. These inputs are supplied to the farmer in the form of an in-kind loan, which may be supplemented by a limited cash loan for land preparation or other purposes. In theory, additional quantities can be obtained at unsubsidized prices on a cash basis, but in fact such transactions constitute an insignificant addition to PBDAC activities. Several features of this system bear emphasis:

- a. Choice of inputs: the farmer must take what the Bank has available; cash will not be provided to purchase alternatives available from other sources.
- b. Level of inputs: the farmer must take the level specified by the Ministry of Agriculture.
- c. Emphasis on controlled crops: although some inputs are available for some uncontrolled crops (e.g., vegetables), the first priority of the system is to provide inputs for controlled crops.
- d. Source of inputs: nearly all inputs provided are either imported by PBDAC or purchased by PBDAC from local public sector producers, for which PBDAC is the only customer (excluding limited operations on the new lands).

As regards intermediate inputs (seed, fertilizer, pesticide), the PBDAC system may be more accurately characterized as an input distribution system than as credit.

The situation regarding capital inputs (livestock and agricultural equipment) is somewhat more flexible. In the case of livestock, farmers are apparently able to make their own purchases

using medium-term loan funds. In the case of agricultural equipment, the farmer can select the type of machinery he wants, but is reportedly limited to those carried by the PBDAC showroom system, on which the PBDAC collects a commission, whether the farmer purchases the item from the showroom or from another dealer. (Thus the interest rate on agricultural machinery is effectively double the official 8% rate.)

2. The PBDAC System for Input Distribution

The PBDAC network constitutes a comprehensive input supply system the currently handles the large majority of inputs moving through formal channels. The main elements of the system include:

- a. Importation by PBDAC on its own account or on behalf of the Ministry of Agriculture or another government organization (procurement is actually handled by state trading organizations under PBDAC tenders; some goods are delivered directly to district depots, while others are placed in intermediate storage in PBDAC warehouses or rented facilities);
- b. Direct procurement of domestically produced inputs, with delivery directly to district depots managed by the BDACs (governorate banks), under contract with governorate cooperative trucking firms;
- c. Financing of parastatal seed production by the Central Agency for Seed and the Egyptian Agricultural Authority, with the PBDAC serving as a collection point for seed produced by private growers under contract to the parastatal seed organizations and providing financing to the parastatals and their contract growers for the production, processing, and distribution process;
- d. Implementation of input distribution, based on preset levels of inputs for each crop and the farmer's official cropping pattern as certified by the cooperative; and
- e. Collection of amounts due from the farmers, either in cash or by deduction from the value of controlled crops (also marketed through the PBDAC system and/or the state-sponsored cooperatives).

Compared to similar operations in other countries, the PBDAC system operates quite efficiently. It is by no means an "on paper only" system, such as is found elsewhere. The PBDAC system handles very large volumes of seed, pesticide, fertilizer, livestock feed, and other commodities. Amounts and values of the main crop commodities are shown in Table I-1.

Table I-1: Illustrative Purchases and Sales by PBDAC, 1984/85 (MT or LE)

	PURCHASES			SALES			GROSS PROFIT**	Unsold Quant.
	Price	Tons	Total	Price	Tons	Total		
SEED		177,314	16,488,715		136,876	20,175,992	3,687,278	40,438
a. wheat	150.00	36,771	5,515,650			7,099,065	1,583,415	6,346
coop				233.33	25,392	5,924,715		
farmers				233.33	5,033	1,174,350		
b. rice	142.08	25,689	3,649,893			5,938,482	2,288,589	(224)
coop				229.17	23,753	5,443,475		
farmers				229.17	2,160	495,007		
c. cotton	24.83	102,986	2,557,142			2,453,188	(103,955)	31,216
coop				34.17	71,023	2,426,856		
farmers				35.25	747	26,332		
d. broadbeans	537.50	4,789	2,574,088			3,058,650	484,563	(66)
coop				630.00	4,190	2,639,700		
farmers				630.00	665	418,950		
e. soybeans	309.64	7,079	2,191,942			1,626,607	(565,335)	3,166
coop				414.20	3,645	1,509,759		
farmers				436.00	268	116,848		
PESTICIDES		4,312	38,493,339		3,965	35,838,885	(2,654,454)	347
a. Cotton (local)		730	1,838,387		557	1,792,645	(45,742)	173
Kelthane S	2122.48	347	740,746	2825.00	308	870,100	129,354	41
Dimethioate 40	2880.95	381	1,097,642	3705.00	249	922,545	(175,097)	132
b. Cotton (imported)		2,456	32,288,258		2,649	30,609,855	(1,678,403)	(193)
Colthrane	6805.29	192	1,306,616	8130.00	138	1,121,940	(184,676)	54
Lannate	21200.28	2	42,401	23750.00	59	1,401,250	1,358,849	(57)
Dursban 48	9528.24	216	2,058,100	11550.00	325	3,753,750	1,695,650	(109)
Ripcord	35349.44	30	1,060,483	42790.00	31	1,326,490	266,007	(1)
Dyza*	20500.00	760	15,580,000	25320.00	127	3,215,640	(12,364,360)	633
RUP 962	8856.09	185	1,638,377	10360.00	197	2,040,920	402,543	(12)
Sephen 85%	4033.26	134	540,457	4865.00	329	1,600,585	1,060,128	(195)
DC702 FL	11239.33	758	8,519,410	13270.00	908	12,049,160	3,529,750	(150)
CCN 52	11384.61	104	1,183,999	13590.00	128	1,739,520	555,521	(24)
Hausathione	4778.88	75	358,416	5800.00	407	2,360,600	2,002,184	(332)
c. Other crops		1,126	4,366,693		759	3,436,385	(930,308)	367
Basangram*	6800.00		0	8305.00	11	91,355	91,355	(11)
Gramaxone*	2894.70	210	607,904	3200.00	57	182,400	(425,504)	153
Ronestar	4918.00	183	899,994	5970.00	118	704,460	(195,534)	65
Saturn	3900.13	733	2,858,795	4290.00	573	2,458,170	(400,625)	160
FERTILIZERS**		2,835,000	216,345,195			215,250,200	(1,094,995)	
a. Nitrogenous (imported)			22,687,630			14,976,300	(7,711,330)	
Ammon. Sulfate 20.6	91.91	161,000	14,797,510	57.90	161,000	9,321,900	(5,475,610)	
Ammon. Nitrate 33.5	127.26	62,000	7,890,120	91.20	62,000	5,654,400	(2,235,720)	
Urea 46.5	169.68	0	0	126.80	0	0	0	
b. Nitrogenous (domestic)			127,691,900			151,053,200	23,361,300	
Ammon. Sulfate 20.6	32.50	95,000	3,087,500	57.90	95,000	5,500,500	2,413,000	
Ammon. Ntr. 31-33.5	46.20	308,000	14,229,600	91.20	308,000	28,089,600	13,860,000	
Urea 46.5	123.50	850,000	104,975,000	126.80	850,000	107,780,000	2,805,000	
Calc. Am. Ntr. 15.5	26.60	203,000	5,399,800	47.70	203,000	9,683,100	4,283,300	
b. Phosphates			60,200,080			47,225,700	(12,974,380)	
Super Phosphate 18	23.60	890,000	21,004,000	30.30	890,000	26,967,000	5,963,000	
Triple SP 45	169.68	231,000	39,196,080	87.70	231,000	20,258,700	(18,937,380)	
c. Potas. sulph.	164.73	35,000	5,765,585	57.00	35,000	1,995,000	(3,770,585)	

* Estimates based on previous year levels.

** Excluding change in inventories.

*** Imports converted to LE at .707. Sales assumed to equal purchases

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The system is far from perfect, however. The main drawback of the system as currently constituted is that it is based on predetermined quantities of inputs, rather than on farmer demand. The system is not geared to responding to individual farmer requirements and, as currently constituted, would be difficult to change. Other problems include:

- a. Losses of commodities in the system, including quality loss through poor handling, inadequate storage facilities, inappropriate stock management practices, etc.;
- b. Diversion of commodities for which there is a black market (notably fertilizer, livestock feed, and certain pesticides); and
- c. Lateness or unavailability of inputs at the village level, or availability of inappropriate commodities.
- d. Inconvenient operating system from the standpoint of the farmers, with limited operating hours, no technical information, etc. (although this must be balanced against the presence of a mandubiya in nearly every village).

It is difficult to judge the level of losses in the system. Official policy is that losses are very low and information is not available to contradict this policy. Casual observation of shonas and mandubiyas suggests that losses are much higher than the 1 or 2% usually cited by the Bank.

The private sector plays virtually no role in the PBDAC system as it now exists. Private sector participation is limited to:

- a. Rental of storage facilities from private owners at the port, depot, and village level;
- b. Occasional use of private transporters; and
- c. Limited cooperation with private sector dealers for whom PBDAC serves as an outlet (this system is currently restricted to machinery importers, although in the past it was also used for pesticides on a minor scale).

B. Role of Other Public Sector Organizations in Input Supply

Outside of the New Lands and the state farms, other public sector organizations have virtually no role in the distribution of inputs as such. Their dominant role in the domestic production of inputs nonetheless makes them key actors in the input distribution system. This involvement may best be treated on a commodity basis.

The state dominates each of the three most important input commodity groups treated in this paper:

1. Fertilizer is currently a state monopoly, as regards its domestic production and import; the country is nearly self-sufficient in nitrogenous fertilizers, which are produced by a number of state-owned firms. Additional quantities are imported exclusively by the public sector. Private traders are legally barred from both importation and sale, by decree of the Ministry of Agriculture.
2. Seed for cotton and the major grains is virtually a state monopoly, although private firms have historically been responsible for berseem seed and are increasingly involved in maize and sorghum seed, vegetable seed production, and other crops; albeit with substantial state participation. Due in part to assistance from AID and other donors, the parastatal grain seed producers now have sufficient capacity to supply nearly the full domestic demand for grain seed, assuming an on-farm seed retention rate of 50% (for a complete discussion of this issue, the reader is referred to the DCA report on seed production).
3. Pesticides are produced by both private and public firms, with the domestic market about evenly divided between the state-owned companies (notably Kafr ez-Zayat) on the one hand and private importers on the other, although recent shifts in the profitability of importing finished products may have altered this situation dramatically. Local production of pesticides has been expanding, primarily through joint ventures with off-shore firms, but the future of this activity is also in doubt, due to the recent changes in import regulations.

In many cases, the public sector is in the position of regulating its competitors and, indeed, determining whether they are able to operate at all. Naturally, this is not a situation conducive to open competition or effective regulation of either public or private suppliers.

C. Current Private Sector Operations in Input Distribution

Within the limited scope allowed for its operation, the private sector is expanding fairly rapidly. A number of international companies have made investments in the production of agricultural chemicals or seed (Bayer, Pioneer, etc.) and the size of the Egyptian market should be sufficient inducement for others to follow if conditions allow profitable operation.

Not surprisingly, given the state monopoly in fertilizer and the near-monopoly in grain seed, the private firms are heavily concentrated in the pesticide market, with minor activities in vegetable seed, foliar fertilizer, and other inputs. They carry a mix of domestic and imported products. Importers contacted during

this study indicated that importation has virtually ceased at the present time as the result of deteriorating conditions in the foreign exchange market. The drop in the value of the pound, together with the inflexibilities in the price control structure, make it impossible to operate both legally and profitably. Firms differ in the choice they have made along this continuum.

Several of the international firms operating in Egypt are planning to establish private distribution systems in cooperation with local partners, using and expanding on the existing system. At present, however, these networks are largely in the planning stage. The system therefore consists of traditional firms, some of which operate with one foot in the black market.

The main elements of the market can be characterized as follows:

1. Large retailers in Cairo and other large cities, equivalent to wholesalers;
2. Intermediate retailers in the larger cities and some towns, operating in both the wholesale and retail market; and
3. Small village-level retailers.

The larger firms reportedly number around 25, but sales volumes are heavily concentrated in the top half-dozen firms. In most cases, these are old, established family firms, often managed by second generation owners. These firms both retail and wholesale to firms lower down in the channel. As in other product groups, these firms typically operate out of small, crowded premises where a very large variety of products are concentrated on limited shelf space. In some cases, there is additional storage off-premises, but the involvement of this group in the black market makes the full extent of their facilities difficult to assess.

These firms typically provide a line of credit to their major customers, including wholesalers and retailers below them in the chain. This operates on an informal basis, whereby sub-dealers collect goods for resale and make payments on their running account as convenient. The most common arrangement appears to be half down with the remainder when the goods are sold, or 3-6 months later. Any interest charges are hidden in the price structure.

Some of the informal networks are quite large. One dealer reported that, prior to the cessation of private trading in fertilizer, he dealt with up to 250 sub-dealers at the retail level.

At the intermediate level, the picture is essentially the same but on a smaller scale. Zagazig, a governorate capital, is reported to have eight intermediate-level outlets for agricultural chemicals, of which at least one is in effect a subsidiary of one of the larger distributors. All but two of these have been in operation for more than five years. Trade at this level is brisk,

even though it was observed at a low-point in the agricultural cycle (late January). Quantities sold range from several kilos to a few grams of Lannate for control of bollworm on berseem, packed in folds of scrap-paper and selling for PT 10. (Most of the customers were women in the latter case.) Margins at this level were reported as 5% in one case, but this could not be confirmed at other locations.

Although the system is still operating at a rudimentary level, the beginnings of private sector extension can be observed. In several instances observed during field work, farmers asked the shopkeeper for information and appeared satisfied with the result. The larger shops had information sheets provided by suppliers and reported being visited regularly (but not frequently) by salesmen or other agents.

At the local level, the system is just beginning to take off. In two villages, small shops were found that had not existed two years before. In one case, the shopowner was an older farmer who had come into some money and decided to establish a shop. In another case, a schoolteacher had opened up a shop in his village. Interestingly, the salesclerks in both cases were women, although apparently the owners themselves operated the store in the evening, when trade was heaviest. In both cases, the owners expressed satisfaction with their investment, which ranged from LE 1000 to LE 2000. Margins at the village level were reported as around 10-15% in one case, but again this could not be confirmed. The price control system makes it difficult to gather more accurate information on financial issues, such as margins, since the current regulations force traders to operate on the margin of legality in order to be financially viable.

At this level, the retailer must seek out the supplier by travelling to the governorate capital or Cairo to gather supplies. Not surprisingly, given the low margin on which they operate, these stores stock only as much as they expect to sell in the near future. Large orders or special requests are filled within a day or two by going to the supplier and collecting them.

Other than suppliers' credit, no instance of formal credit was found during field work (which admittedly was severely limited by time constraints). Nor did any of the respondents evince the slightest interest in formal credit, which they described as too risky. Although all stores offer some credit to customers (based on personal knowledge), only the village level stores reported that most of their sales were on a credit basis.

In summary, the private sector network exists and is expanding, but it is not well developed at the present time. Substantial expansion in the number of firms and the volume handled by each firm would only be possible with a large investment in facilities, staff training, and the stock itself. Even with favorable conditions, this will be a slow process.

II. Constraints to Expansion of the Private Sector's Role in Input Distribution

Increased reliance on private sector channels for the production, importation, and distribution of agricultural inputs is severely constrained by problems in three areas:

- A. Institutional constraints exist in both the public and private sector input distribution systems and will be major barriers to rapid reform;
- B. Policy constraints seriously inhibit private operations, primarily at the macro-policy level but also at the sectoral level;
- C. Other constraints, such as access to credit and technologies, are present, but are not of major importance.

This section discusses the major constraints in each of these areas. It should be emphasized that the policy environment for private sector trading, especially the regulatory environment, is extremely complex and subject to frequent change. The description in this section is based on discussions with a relatively limited sample of private and public sector participants in the input supply system. Consequently, while accurate in its broad outlines, the description in this section does not fully reflect the complex nuances of public-private interactions in the current system.

A. Institutional Constraints

The principal constraint to private sector expansion in input supply is public sector market intervention. While this intervention includes a broad range of regulatory restrictions (on importation, etc.), by far the most important form of intervention is direct competition with the private sector by PBDAC and other governmental and parastatal organizations responsible for input supply. It is therefore appropriate to begin with a brief review of the institutional constraints arising from the difficulty of implementing reforms in these organizations, before proceeding to constraints in the private sector as such.

1. Public Sector Institutions

a. PBDAC

As currently constituted, the PBDAC is heavily dependent on commissions deriving from its input distribution activities. These supplied 29% of revenues in 1983/84 and 24% in 1984/85 (based on preliminary estimates). Input commissions and related income is responsible for an even larger share of the Bank's net earnings (37% in 1983/84). (It should be noted, however, that the team was not able to determine the specific method that the Bank uses to arrive at the estimated cost for each operation, and the net

revenue figure must therefore be regarded as indicative.) The income from commercial activities also is critical to covering the large overheads associated with PBDAC management.

Nonetheless, the Bank has made major progress towards its goal of becoming a bank, rather than a supplier of short-term inputs. Over the course of the past five years, the PBDAC has greatly expanded its medium-term lending activities, thereby increasing the average interest rate earned on the portfolio as a whole. As a result, credit operations (including the direct subsidies associated with them) have become profitable. Whereas the Bank lost over LE 2 million on credit activities in 1978/79, credit and other banking operations returned almost LE 50 million in 1983/84, pre-tax.

The direct link between input supply and PBDAC income is only part of the problem, however. At every level, the PBDAC organization and operating procedures are based on the existing input supply system. The procedures used to allocate and distribute short-term credit are intimately linked to the prescribed input packages set by the Ministry of Agriculture (MOA) and administered by the Bank. As discussed further in the credit study accompanying this report, a shift away from in-kind credit would require a top-to-bottom remodeling of short-term credit procedures. While by no means impossible to achieve, the magnitude of this task (and the attitudinal changes that must accompany it) should not be underestimated.

At every level, PBDAC staff devote a large percentage of their time to input distribution. A World-Bank sponsored study identified 11,000 of the PBDAC's 34,000 employees as working directly on input distribution in 1983, compared to 7,000 working directly on credit. Although much of this workforce could in theory be absorbed into an expanded credit operation, here again the task is a nontrivial one.

PBDAC currently owns and operates a vast system of warehouses, depots, and village agencies, much of which would become redundant if input distribution were privatized. Some facilities are leased, and could presumably be disposed of fairly easily; other facilities could be sold to the private sector distributors. Many of these facilities, however, are in disrepair, too large for even the largest private suppliers to purchase, or otherwise difficult to dispose of without disrupting input supply operations.

A final factor is the extent to which the credit operation itself would be affected by privatization of input supply. Many of the specific issues in this regard cannot be resolved in the absence of actual experience with a cash-based system; others can and should be explored further during design. Major questions include:

- i. Whether farmers would demand as much bank credit as they do now if it were not necessary to take credit to obtain inputs (or if credit were available directly from suppliers);

- ii. Whether PBDAC would experience greater difficulties than at present in financing credit (since it appears to operate in part on an in-kind basis itself, with final payment to public suppliers delayed for several months in some instances);
- iii. Whether repayment rates would decline if farmer access to critical inputs was not linked to dealing with PBDAC.

b. Parastatal Input Producers

At present, PBDAC serves in effect as the principal customer (in some cases the only customer) for major parastatal producers of inputs. In the case of seed production, PBDAC is also closely integrated into the production operation, as the MOA's agent for purchasing seed from certified growers, the financier for seed production, and so on.

Privatization of input supply would have a major impact on these organizations, both financial and operational. Operationally, the main requirement would be establishment of a marketing system to handle the distribution of inputs to wholesalers or retailers. Delivery of fertilizers, seed, and pesticides is now simply programmed to various PBDAC facilities in line with the approved packages, a system that is completely incompatible with private sector operations.

The PBDAC system now ensures these organizations of a market, regardless of quality, tardiness of delivery, or price. To the extent that international or local private sector producers could improve on parastatal performance and capture all or some of the market for these commodities, these organizations will find themselves facing losses and/or excess capacity. Naturally, the parastatals and their sponsoring ministries will view privatization as a threat, and their considerable influence can be expected to weigh in on the side of the status quo.

2. Private Sector Market Development

As is to be expected given the pervasive state monopolies in input supply, the private marketing channels are poorly developed. A limited number of firms exist at the wholesale level, both for import and for internal trade, concentrated in pesticides and seeds for the uncontrolled crops. The network at the intermediate and retail levels is almost entirely absent, as discussed above, although there are signs that it is beginning to develop. Even where firms exist, their operations are limited in scope as a result of their statutory exclusion from the high-volume segments of the market. As a result, these firms do not have the facilities or management systems that would be needed to support high-volume operations (e.g., intermediate distribution points, truck fleets, etc.).

The rudiments of a system are present, nonetheless. Although global information on this sector is wholly lacking, an informal survey of operations at different points in the chain shows a system that is growing with surprising vigor. Growth at present is fueled primarily by the ongoing expansion in fruit and vegetable production. This expansion has created a modest but growing market for commercial inputs, particularly improved seed and pesticides. Efforts by international suppliers (e.g., Pioneer in seed, Bayer in chemicals) to penetrate the potentially huge Egyptian market have also created new opportunities for local investors and local firms at all points in the chain. Some of these opportunities have been taken up by large- and medium-scale traders who were involved in input supply prior to the establishment of state monopolies. Many of these firms are still active in input trading in one form or another and constitute a latent pool of expertise, commercial networks, and capital that would respond fairly rapidly to an opening up of trading in agricultural inputs.

There are two constraints to expanding this system to the point where it could efficiently handle the volumes currently managed by PBDAC: a) adjustment costs and b) non-competitive practices.

a. Adjustment costs. Time and a considerable amount of money will be required to develop the new firms, physical facilities, and managerial systems necessary. Even under optimal conditions, ten to fifteen years would probably be required for this system to develop to the point where it could handle efficiently the volumes now flowing through PBDAC. Donor assistance can reduce but by no means eliminate the time required to complete this process or the internal imbalances, false starts, and inefficiencies that inevitably will go along with it.

b. The black market and related non-competitive practices. The private sector system that now exists operates in part on a black-market basis. This has several implications for privatization:

- i. Although private sales volume is sharply curtailed by state monopolies, the profitability of this trade is attractive to those who currently have a share in it, on the private side as well as the public side. Although volumes will be higher after privatization, profit rates will probably decline.
- ii. Over the years, some private traders have established networks that depend on the black market; they will not welcome new competition or the disappearance of highly profitable activities. The black market creates opportunities for cartelization and other restraint of trade that would tend to disappear under open market conditions, and thus a more open market will not be universally welcomed in the private sector. Some of the individuals currently benefiting from the black market are quite influential.

- iii. Even though public sector practices are behind the creation of the black market, private abuses in this system are very real. Such abuses (over-pricing, cartelization, etc.) will not disappear overnight and, during the transition, will provide ample evidence for those who wish to demonstrate that privatization is a bad idea or that market discipline is not a sufficient control on private trade.

These constraints and problems are cited not as evidence that privatization is undesirable or impossible in Egypt; on the contrary, it is necessary for the future development of agriculture. It cannot be overemphasized, however, that privatization will not be easy and that no amount of planning, top-level support, or donor funding will make the transition smooth and trouble free. If the effort is to reach its goal, and not be aborted mid-stream by political or practical problems, it is absolutely necessary to proceed judiciously and to monitor developments closely, especially during the early stages.

At the same time, experience in developing countries indicates that conditions are rarely as favorable for privatization as they are now in Egypt. The present government has repeatedly emphasized its commitment to increasing the private sector's role in order to mobilize the capital and expertise that Egypt needs for development. Consequently, every effort should be made to capitalize on this window of opportunity, making as much progress as possible while conditions permit.

B. Policy Constraints

Even if public monopolies could be eliminated overnight, private input suppliers could not grow and prosper in the current regulatory environment. Policy reforms are an absolute precondition for the privatization of agricultural input markets. Although some of the policy changes required have long been on the agricultural policy dialogue agenda (e.g., input subsidies and crop prices), these distortions in farm-level policies must take second place to the mundane but powerful regulatory mechanisms that pervade the current system. It is possible, although by no means easy, to privatize without removing current input subsidies, correcting distortions in relative and absolute output prices, and eliminating farm-level controls on the cropping pattern. It is impossible to do so without changing the regulations that govern importation and domestic commercial activities.

This section surveys the regulations that currently inhibit private sector trading in the main agricultural inputs (seed, fertilizer, and pesticides). These constraints may be grouped into three broad classes:

1. The general policy environment for private investment, production, and trade;

2. Economy-wide constraints that affect commercial activities in all types of activities, agricultural and otherwise; and
3. Regulations specific to agricultural inputs, which vary from input to input.

1. The General Policy Environment for Private Sector Development in Agriculture

Official government policy in Egypt favors an expansion of private sector activity in agriculture, both in agricultural production per se and in the provision of goods and services to support this growth, including provision of inputs. While this general policy is encouraging, discussions with government officials and others indicate that three major caveats apply to the overall policy:

- a. Private sector activity is encouraged only where it constitutes an addition to the existing level of activity, not where it would replace public provision of goods and services.
- b. Support for private activity does not translate into reduced support for public sector expansion; on the contrary, the growth of state-owned or state-sponsored activity is assigned a high priority, even where such expansion would directly compete with or displace existing private sector firms.
- c. Close regulation of private sector activities, especially trading, is regarded as absolutely necessary to prevent private sector abuse, not only in the area of prices but also in technical quality, safety standards, and suitability to Egyptian conditions; the ability of the market to perform these functions is not accepted by many government officials.

These attitudes are reflected in continuing GOE emphasis on public rather than private solutions to Egypt's problems, as demonstrated by statements in the press, in public pronouncements, and private discussions. Development continues to be viewed as a public sector responsibility, rather than a process in which the private sector can and should take a lead role.

The private sector, to the extent one can generalize about a large and diverse set of individuals, is aware of this difficulty. It is one of the factors underlying investor reticence to move aggressively into areas where the public sector has traditionally played a predominant role.

The public sector orientation of GOE officials is reflected in their response to the economic problems that the country is currently facing. When it is necessary to reduce imports, for example, private sector imports are at the top of the list. When it

is necessary to tighten up on credit, commercial credit bears the brunt of the pressure. The burden of devaluing the pound has fallen almost exclusively on the private sector, while the public sector has been protected by preferential access to subsidized foreign currency. In the present climate of uncertainty, businessmen express hesitation to make new investments. While policies generally favor private investment, many businessmen are concerned that the measures chosen to address the current economic difficulties will further reduce the potential for profitable operation in the private sector.

2. Economy-Wide Constraints on Private Operation

The most important barriers to the rapid expansion of private sector activity in input supply, other than state monopolies in key inputs, lie in the system of regulation that controls commercial activity in Egypt, rather than in specific controls directed at agricultural inputs. Private sector operation is rigidly controlled in Egypt, at both the import and retail level. Although these controls are not universally effective, they are implemented with sufficient force to constitute a major impediment to private sector profitability. Moreover, even if the controls are not enforced, it is scarcely desirable to build a private sector input supply system that must operate illegally to be profitable.

The two main types of controls are:

- a. Controls on imports and access to foreign exchange, including tariffs; and
- b. Controls on prices and margins.

a. Import and Foreign Exchange Controls

As Egypt's balance of payments has worsened, the Government has taken a number of measures to tighten up on access to foreign exchange. This system has been repeatedly revised in the past few months and major revisions are currently under discussion. The mission should monitor these developments closely, as they are likely to have a major impact on private sector activities, by no means limited to the sector discussed in this paper.

The net effect of recent changes is to increase the price of foreign exchange to private importers. Not only have changing policies been reflected in a rapid increase in the free-market price of the dollar, but changes in banking regulations have made it more difficult to obtain foreign exchange even at the free-market price. Thus invisible queuing costs and transaction costs have been added to the visible increases in the free-market price. Such costs substitute to some degree for changes in the exchange rate itself, and may have been a factor in reducing the growth of demand for foreign exchange, and thus slowing the drop in value of the pound. Some observers nonetheless expect the pound to move toward

two-to-one with the dollar in the coming months, making the "gray market" price nearly three times the price available to public sector importers.

The practical impact of these changes is complicated by the way that foreign exchange access interacts with other import regulations in the Egyptian system. In some cases, businessmen must enter into transactions that will not be completed for several months, exposing them to very large foreign exchange risks.

Up to the present time, permission to import is regulated by a series of committees, of which the most important is the Rationalization of Imports Committee (Tarsheed) in the Ministry of Economy. The Tarsheed system has constituted a major bottleneck in the importation process, with permission sometimes obtained rapidly but often delayed or denied altogether. Tarsheed is scheduled to be abolished but the implementation of this decision has been delayed while a system of tariffs is developed to replace Tarsheed. Under the new system, goods will be classified into one of five categories, ranging from virtually prohibitive tariff levels of 100% or more to little or no tariff on "necessary" items.

A major function of the Tarsheed system has been to protect Egyptian manufacturers, especially public sector firms. Many goods produced in Egypt (e.g., small diesel engines used in many agricultural machines) were on the list of prohibited items. Tarsheed operations are quite opaque, adding to the uncertainty faced by businessmen as they attempt to expand the range of items they offer to their customers.

It can be expected that the new system will preserve this feature. Since many of the main agricultural inputs are produced by one or more parastatal organizations, important agricultural commodities may well end up on the high-tariff lists, although they are clearly not luxury items. AID should monitor this process more closely, in cooperation with the Commercial Office of the Embassy, and attempt to prevent prohibitive tariffs from being put on agricultural inputs or the chemicals used in their manufacture. Once this list is announced, it will be difficult to change it.

Tariffs on agricultural inputs are generally low (e.g., 2% on agricultural machinery). There are several exceptions to this generalization, however, many of which appear to be minor but are in fact quite important. The tariff on machinery is low, for example, but the tariff on spare parts is over 40%. The tariff on pesticides is 2 or 3%, but the tariff on pesticides in packages of less than 25 kg. is over 40%. The latter tariff is variously interpreted as an example of Tarsheed unpredictability (a tariff intended to affect household chemicals being improperly interpreted) and as an example of a hidden protective tariff for the state-owned pesticide firm, Kafr ez-Zayat, since many chemicals sold for small-farm use would normally be sold in much smaller packages than 25 kg. (Indeed, by encouraging repackaging at the point of sale, this regulation increases the health risk facing small farmers from improperly-labeled and -packaged materials.)

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b. Price Controls and Other Regulations

By far the most important set of regulations are those governing the price that may be charged to the final consumer. As presently constituted, the price-setting mechanism ensures that private importation is practically impossible under the current foreign exchange regime.

In essence, these regulations set a maximum price that can be charged at the retail level. Depending on the source of the good sold, this price is calculated as follows:

- i. Imported goods: In general, the price control system sets a maximum retail price for imported goods by adding a maximum margin of 30% to the CIF price, converted at the "incentive" rate, as specified in decree 119 of 1977, issued by the Ministry of Trade and Supply (as it was then). The incentive rate is currently .84, which means that the official margin does not cover the cost of the foreign exchange required for import, much less any internal distribution costs. In some cases, the margin is reportedly lower than 30%, but in other cases, (e.g., pesticides), a higher percentage is used (around 45%), based on a recommendation by PBDAC. Further research on this point is needed, since observers in different parts of the system provide somewhat different descriptions of the method of calculation (e.g., whether customs may be added before the margin is calculated or must be absorbed within the margin).
- ii. Public sector products: Maximum prices for these goods are set by the public sector, allowing a narrow margin. Although this margin is sufficient to permit operation, it is too low to encourage dealers to undertake the aggressive marketing activities that provide the farmers with information about new products and their appropriate use.
- iii. Private sector products: The price schedule for private sector products is apparently set by the committees regulating that particular type of product, but other ministries, especially the Ministry of Industry, also play a role. It appears that price control does not apply to all domestic products, but further research on this point is needed.

In general, price controls allow a margin of 15-30% depending on the type of product and its source. This margin must cover all stages of the wholesale and retail operation, all the way to the final consumer. These margins are too low, especially given the risks that dealers must bear as they move into new areas of activity and the desirability of encouraging them to offer supporting services to their customers. Such activities will only be

undertaken if they are profitable, a situation that is effectively foreclosed by the current price structure. Use of credit is also precluded by these marketing margins, which may indirectly limit competition by tying local retailers to suppliers willing to provide informal credit (as discussed elsewhere, this willingness is based on part on the profitability of black market operations).

It must be emphasized that merely "cleaning up" this system, by raising margins, for example, is not sufficient and may actually be more difficult than abolishing price controls completely, at least on agricultural inputs. The concept that mark-ups of 100% or more may be completely reasonable on low-volume, low-turnover items will be extremely hard to sell to GOE officials trying to "protect" the farmer.

Other regulations, such as that requiring prices to be posted prominently, do not appear to constitute serious impediments to profitable operation. Nonetheless, it has not been possible to explore the regulatory system completely during this study, and elimination of other regulations may be very important to profitable operation in particular segments of the market. Moreover, AID should monitor developments in this area closely, since new regulations are issued on a regular basis.

3. Regulation of Agricultural Inputs

The existing system for regulating agricultural inputs severely limits the potential for private sector activity and indeed directly excludes the private sector from the most important parts of the market. The regulatory system may be broken down into three components:

- a. Official state monopolies on trading in key commodities, such as fertilizer and pesticides used on cotton;
- b. Subsidization of inputs provided by PBDAC, a system that is closely tied to output price controls and other controls in the agricultural sector;
- c. Regulations on which commodities may be sold, conditions of sale, etc.

Of these, the first two are clearly the most important. The existing regulatory for agricultural commodities, while constituting a barrier to entry to some degree, does not appear to be a serious problem at present. The established international firms wishing to import into Egypt appear to be able to gain access to the Egyptian market, although there is a built-in three year delay. In the future, however, the testing system may become a serious problem, since it applied to locally-produced products as well as imports and to generic products, such as malathion, as well as to patented chemicals and varieties. Thus, small local firms wishing to specialize in production of special chemicals or seeds for the

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Egyptian market may find the cost and delay associated with the system an insuperable barrier.

The specific system for seeds is fully discussed in the report on the Egyptian seed industry prepared for the DCA project. (The system for pesticides, which is essentially similar, is described in more detail in Annex 2 to this report.)

Private trading is currently illegal in fertilizer (except foliar fertilizer, a tiny fraction of the total market) and in any pesticide used on cotton (plus certain other chemicals used on other crops). Since the pesticides on the excluded list include several of the chemicals most commonly used in agriculture (e.g., sevin), the market is artificially restricted. The degree to which other chemicals can be substituted for those on the excluded list is a technical and economic issue that should be explored further during design.

The rationale for excluding cotton pesticides from use on other crops is the desire to ensure their continued effectiveness on cotton, by inhibiting the development of resistance in the pest population. While technically sound, this policy is an example of the many regulations that artificially favor cotton at the expense of other crops. In fact, the restriction on importation and sale of these broad-use chemicals has simply created a black market that diverts a portion of the limited supply available to other crops. Participants in the system estimate the diversion at 10% of the total, still a significant amount in view of the heavy pesticide use on cotton.

The abolition of the state monopolies is clearly a key element in the privatization of the system. As a practical matter, this abolition must be accompanied either by price reform, by an increase in the supply available at the subsidized price, or by a combination of both. The black market would continue to exist, and in fact would grow larger, if open trading in fertilizer were not accompanied by measures to bring the market into balance at a price acceptable to the GOE.

A better understanding of the market for fertilizer will be absolutely essential to the design of a reform program that meets the needs of the farmer, the private sector, and the economy as a whole. In the present environment, this will require much better information on the operation of the black market, which is the only real source of information on the prices that farmers are willing to pay for fertilizer under the current price regime.

A key issue is the portion of farmers who purchase fertilizer on the black market. It is reported that about 10-20% of the fertilizer is ultimately sold on the black market, but the reliability of this estimate is unknown. The black market price in the Delta is reported as 150% of the subsidized price, but other observers report a price differential of 300% in Upper Egypt, especially during the summer. If this market is very "thin," that is, if very few farmers actually pay this price, then it may not be

a good indicator of the demand for fertilizer. If, on the contrary, most farmers buy their "last bag" on this market, then the price could be increased to the black market level without a major impact on the amount demanded or used. In this case, a price rise would not decrease crop production directly. Nonetheless, the indirect impact, a result of the decrease in farmer income and the profitability of crop production, could still be substantial.

The mission has three choices in this regard:

- a. Avoid the issue entirely by excluding fertilizer (or at least nitrogenous fertilizer, the major item) from the privatization effort;
- b. Skirt the issue by ensuring that there is sufficient fertilizer on the market to clear it at the subsidized price; and
- c. Confront the issue by accompanying privatization with a price increase designed to bring demand into line with supply.

Either of the last two options will require a much better understanding of fertilizer market than is currently available. The mission and the GOE must have a reasonable estimate of how much fertilizer will be demanded at the various prices under consideration and, equally important, the effect of changes in fertilizer price and use on farmer income, total subsidy expenditure, agricultural production, and crop prices. In view of the mission's various activities in fertilizer (the proposed investment in a new factory, the self-help measures, etc.), such a study is long overdue.

C. Other Constraints

Set beside the institutional and policy constraints discussed in the previous section, the other factors constraining private sector activity in input supply pale into insignificance. The priority in privatization is the removal of barriers in the first two categories, a formidable but extremely important task. Once these are removed, other constraints may emerge as important, but the supply system is a long way from that point at this time. They are discussed here for the sake of completeness and to encourage the mission not to divert its attention away from the main issues, which are those discussed above.

Two constraints are frequently cited with regard to private sector development in Egypt and elsewhere:

1. access to credit; and
2. access to information and new technology.

Neither of these is a significant constraint at the present time for the development of the private sector input market in Egypt.

1. Access to Credit

Greater use of credit will be required if the private input supply system is to grow fast enough to replace PBDAC over the next ten years. At the present time, however, there is not an unmet demand for credit that could be filled by donor action. Generally speaking, input supply firms fall into two categories:

- a. Large, established commercial interests that have ready access to commercial credit through the formal banking system (with one important exception, discussed below); and
- b. Small, sometimes newly established firms that do not have access, but do not need formal credit because they have interest-free supplier's credit and do not want it because they mistrust loans and lenders.

In this environment, it is probably better to ensure that the large suppliers have sufficient access to credit so that they can continue to finance their network of sub-dealers informally. Over time, the smaller dealers will develop the sophistication to move to get credit on their own, but that point is several years down the road. Given the way business currently operates in the village (and the large amounts of cash still available at that level from workers' remittances and the savings of returned overseas workers), an effort to drive the development of the retail system with credit appears doomed to failure. In particular, expanding the supply of credit is not a promising means of inducing potential entrepreneurs to enter the input supply business.

2. Access to Information and Technology

In a competitive environment, it is in the suppliers' interest to provide as much information as possible to the retail supplier. If customers cannot find out about products available, are not convinced of their value, or are not satisfied with the results, they will not return. The use of agricultural chemicals, especially insecticides and fertilizer, is well established in Egypt. Farmers are rapidly accepting improved seed varieties, especially for vegetables. At this time, there does not appear to be a need for special action in this area.

It should be emphasized, however, that research and extension have a major role to play in developing technologies suited to Egypt and in ensuring that the farmer can use them effectively and safely. These tasks are integral to the research and extension effort as such, however, and a special effort as part of this project does not appear necessary. Care should be taken in expanding the extension model used in the SFPP to ensure that agents are given adequate training on the negative aspects of chemical use

as well as on the positive benefits, particularly where the former are not obvious to the farmer or are not likely to be passed along by the retailer.

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III. Alternatives for Privatization of Input Supply

A. Overall Considerations

There are five basic approaches available for privatization of input supply activities currently carried out by PBDAC:

1. Privatization of PBDAC itself, in whole or in part
2. Cessation of PBDAC's input activities, to allow private firms to enter and replace it;
3. Promotion of private sector expansion while maintaining PBDAC activities at their current level;
4. Promotion of conditions for private sector entry into the market, with gradual phase-out of PBDAC activities as private sector activity expands; and
5. Contractual arrangements to increase private sector involvement within the existing PBDAC structure.

In evaluating these alternatives, it is necessary to bear in mind the objectives being sought through privatization. In the current situation, privatization offers two principal benefits to the agricultural sector:

1. Establishment of a competitive market in agricultural input supply, leading to the provision of inputs to farmers on a more flexible, efficient, and technically effective basis; and
2. Creation of conditions permitting PBDAC to develop as a financial institution offering credit to farmers and agribusinesses on a financially sound basis, thereby promoting the development of the agricultural sector.

Privatization as such does not guarantee that these objectives will be achieved. On the contrary, replacement of the PBDAC monopoly with a private sector monopoly or other non-competitive situation cannot be viewed as an improvement. Alternatives that weaken PBDAC as a lending institution are equally unacceptable, since the small-farmer market served by PBDAC is not attractive to formal lending institutions, whether public or private.

The remainder of this section briefly evaluates each of the five alternatives outlined above, as the basis for recommending an approach most suited to the current situation in Egypt and the development needs of the sector. In some cases, more than one variation on an alternative is discussed. The available alternatives are evaluated strategically, rather than treated fully in cost-benefit or financial feasibility terms. A

more rigorous analysis of the most promising alternatives should be carried out during project design, but such an analysis would be premature at this time, given the many unanswered questions regarding the political and institutional feasibility of the proposed reforms.

B. Privatization of PBDAC

There are several quite distinct approaches that might be taken to privatizing PBDAC itself (as opposed to privatization of the input distribution function that PBDAC now performs):

1. Separation of PBDAC into a credit bank and a subsidiary input distribution corporation, followed by sale of the latter to private investors;
2. Sale of a major interest in PBDAC (or a new input subsidiary) to private investors, with the Government retaining partial ownership;
3. Breakup of the current distribution system into several subsidiaries on a geographic basis (governorate-by-governorate) or a functional basis (importation, wholesaling, retailing, etc.), followed by privatization of all or some of these subsidiaries.

The primary difficulty with all of these approaches, assuming that they are politically and technically feasible, is that they do not ensure that the resulting situation will be a competitive market. On the contrary, the most likely outcome is that PBDAC or successor private sector firms would use their improved capital and greater flexibility to consolidate the current monopoly position, making it even more difficult to establish a competitive market in the future. Although it is possible that a competitive market would ultimately develop through competition among PBDAC's spin-offs or entry of new firms, this outcome is by no means assured. The political and practical problems associated with these alternatives are also immense, made more so by the fact that some of them do not lend themselves to pilot testing.

Nonetheless, as discussed in the credit report, the feasibility of dividing a BDAC into a credit subsidiary and one or more input distribution subsidiaries deserves further exploration during design. Whether or not the subsidiary could be privatized, separation of the credit and input functions would help to clarify the status of the credit operations, a key step in undertaking reforms in the latter.

C. Cessation of PBDAC Trading Activities

In principle, PBDAC's input supply activities could simply be closed down, related assets (such as depots) liquidated, and credit transferred to an all-cash basis. Even if this were politically acceptable, the discussion of the current system and constraints to private sector development should have made it clear that this approach would be disastrous. Despite PBDAC's deficiencies, it is currently the only game in town: it operates the only warehouses with sufficient space to serve the basic needs of the agricultural sector, it has the only nationwide network of village agencies, it is the only significant customer for state-produced inputs and the largest importer.

D. Promotion of Private Alternatives at the Margin

In many ways, the easiest approach to privatization would be to "freeze" PBDAC input distribution at its current level, allowing the private sector to compete for the new opportunities created by expanded use of commercial inputs in Egyptian agriculture. This approach would eliminate the need to deal head-on with the organizational and political difficulties associated with reducing PBDAC input supply operations. Reform of input subsidies could also be postponed more easily under this approach, since PBDAC would remain the sole channel for subsidized inputs.

This alternative appears to be feasible, and could be used if the alternatives discussed below prove unobtainable, but it has two major flaws:

1. PBDAC's operation is too large to leave sufficient room for growth at the margin. Without cutting into PBDAC's current volume, it is unlikely that the private sector could achieve the sales volume and total profitability needed to attract aggressive, well-funded entrepreneurs. Thus, there would be a real risk that the private sector would be unable to mature into a healthy network of competitive firms.
2. Subsidized sale by PBDAC alongside unsubsidized sale by private retailers creates an unhealthy market situation (even if the latter is legal) by encouraging corruption, mistrust of the private sector, and inefficiency in the public sector. By artificially restricting potential sales volume to a fraction of the total, this approach tends to increase private sector costs, leading to higher costs to the farmer-consumer and a reduction of competition.

In short, this alternative is not sufficiently different from the status quo to achieve the objectives of privatization.

Even if the major policy barriers to private sector growth (e.g., price controls) can be removed, this approach appears to offer too little scope for rapid growth by private input suppliers.

E. Promotion of Private Sector Suppliers with Phase-down of PBDAC Supply

Privatization of input supply within a ten-year time frame will require that new opportunities be created to which private sector firms can respond. Under current circumstances, these opportunities must come in large part out of PBDAC's current market share. The approaches discussed in this section and the following one appear to represent the best alternatives for accomplishing this transition.

The feasibility of either approach and the best way to implement them can only be ascertained by testing in the marketplace. Since a large number of uncertainties surround this process, testing of several approaches would be highly desirable. The most promising options under this approach, in approximate order of feasibility, are:

1. Permit local retailers to purchase inputs from PBDAC depots for local resale, at a wholesale price consistent with the PBDAC retail price;
2. Encourage private sector wholesalers to use the depot as an intermediate distribution point for their products, whether or not they compete with PBDAC inputs, charging a commission for handling their goods;
3. Permit local retailers to open up PBDAC distribution points in villages that currently lack them, and sell PBDAC inputs for cash or credit;
4. Reserve a fixed amount of local production for purchase at the factory by wholesalers rather than PBDAC at the same price as PBDAC;
5. Provide PBDAC credit in cash rather than in kind to encourage farmers to select the source of inputs best meeting their needs;

These options are not mutually exclusive; on the contrary, several of them can and should be tested at the same time, such as use of the depot (shona) for sale of PBDAC-owned goods and private goods on consignment. All of these options share two disadvantages from the point of the PBDAC and the GOE:

1. By cutting into PBDAC's market, they make PBDAC's facilities partially redundant; PBDAC will oppose any move of this kind on the grounds that its own

distribution points are already serving these customers;

2. All of these systems disrupt the track that is designed to provide a predetermined path carrying a given bag of fertilizer from the factory through PBDAC to Farmer X and onto a particular acre of, say, cotton; from the GOE's perspective, there is no guarantee that Farmer X will be able to get his fertilizer or that he will apply it on the right crop.

Both of these disadvantages are inherent in privatization itself and cannot be eliminated without gutting the program. The aim is not to create a private system that functions exactly like the public system. These "difficulties" serve to underscore the need to conduct dialogue on these options at a level of government above PBDAC (although PBDAC management must of course be involved in these discussions as well).

F. Contracting Out PBDAC Input Supply Operations

Although PBDAC currently contracts out many operations (off-shore procurement and in-country transport, for example), these activities are, with only minor exceptions, contracted out exclusively to the public sector or para-public entities such as the governorate transport cooperatives. In many cases, this form of contracting is closely tied to special features of PBDAC transactions, such as access to foreign currency at subsidized rates. In addition, almost every PBDAC operation in the input supply channel could be contracted out.

In principle, PBDAC could contract out the entire input supply operation as a whole. This approach, while theoretically feasible, cannot be considered a serious option because no private entities exist with sufficient capacity to carry out an operation of the scale operated by PBDAC. Even with access to PBDAC storage and distribution facilities, a contractor would have to begin from scratch to construct the management and accounting systems needed to make the operation work. Moreover, the purpose of privatization is not to create a stronger or more efficient monopoly, but to replace it with a competitive market.

Setting aside a single, massive contract, potentially viable options in this area include:

1. Shifting international procurement to open tenders, rather than tenders limited to public sector firms (this would require making foreign exchange available at .7 or alternative arrangements to permit private importers to compete);

2. Shifting domestic transport to private sector firms, or awarding contracts on open tender (here again, measures to address any subsidies on the governorate cooperatives would have to be included);
3. Contracting out management of the district depots (shonas); and
4. Contracting out management of village agencies (mandubiyas).

The first two options are self-explanatory. Both should be included in a package of reforms to be adopted under the proposed project. Since PBDAC currently contracts out both of these activities, the barriers to use of private firms are political rather than institutional.

The second two options, however, are somewhat more problematic, although they are also attractive for several reasons:

1. Contracting out shona and/or mandubiya management could serve as a transitional phase to divestiture of these functions and sale of the facilities to the private sector, permitting private sector firms to gain experience in handling the volumes currently handled by PBDAC without requiring them to make a large capital investment or assume the substantial risks associated with this type of business;
2. Contracting out would provide a means of continuing to employ the personnel currently working in these facilities who, in addition to their practical expertise in the operations concerned, constitute a potentially powerful opposition to privatization; and
3. Contracting out would enable the PBDAC to develop experience in dealing with private firms, while still retaining a large measure of control over the operation.

At the same time, contracting out faces several major barriers that would limit its effectiveness and indeed its feasibility:

1. The facilities in question currently handle large amounts of commodities, including livestock feed as well as fertilizers and other goods, in which there is an active black market. Clearly, these goods would either have to be shifted to a separate channel or measures introduced to eliminate the black market. Otherwise the inevitable leakages would be seen as proof that privatization does not work.

2. Simply contracting out the current operation does not provide the farmer with the increased range of choice that is one of the aims of privatization, nor does it introduce competition into the input market system. On the contrary, by giving individual entrepreneurs a tremendous starting advantage (PBDAC's large volume and established clientele), it would tend to promote the development of mini-monopolies in each location.

G. Lessons from Experience with Privatization

There is little experience world-wide with privatization of agricultural input supply. Niger is currently conducting an experiment with divestiture of a state-owned system with many similarities to PBDAC. This experiment is not sufficiently far along to provide useful information for the Egyptian situation. Moreover, the method agreed upon--sale of the parastatal to state-established cooperatives--is not a model that would appear appropriate in the Egyptian situation. (Indeed, this was attempted in the late 1960s and early 1970s and failed.)

Neither contracting out nor opening up public facilities to private entrepreneurs has an established track record on which the Egypt mission can draw for lessons learned and possible means of overcoming difficulties. The Government of Pakistan is conducting several experiments with contracting out basic public services (e.g., road maintenance) to the private sector. The long-standing Pakistani system for collecting road taxes, in which private contractors bid for the collection task but must use a largely public workforce in implementation, is another example of contracting out. The Bangladesh experience with fertilizer, which is well-known to the mission, provides the best case of privatization at the retail level and the success achieved there is a powerful argument for attempting a similar approach in Egypt. This experience offers several lessons of relevance to the PBDAC case:

1. The experiment focused initially on the retail level, rather than the wholesale or import level. Efforts now underway to move up the channel are encountering greater resistance.
2. An important element in achieving success was ensuring an ample supply of fertilizer, to reduce the chance of black markets or other disruptions in the system.
3. Any problems that were observed during the privatization experiment tended to be blamed on the experiment, even if they were due to wholly unrelated factors, such as delays in international shipments.

Although mission personnel are familiar with the Bangladesh situation, it would be desirable to reexamine this experience to determine whether recent developments hold further lessons for the Egyptian case.

IV. A Recommended Approach to Privatization under the Agricultural Production Credit Project

The PBDAC distribution system has made a major contribution to the growth and commercialization of the input market in Egypt, particularly at the small farmer level. Small farmers in Egypt, unlike their counterparts in most developing countries, have access to improved inputs such as fertilizer and selected seed. Nonetheless, the rural economy has now "outgrown" the PBDAC system. Farmers will not be able to adopt new technologies to expand production and income at the desired rate unless they are served by an input supply system that is more flexible and more responsive to farmer demand than the PBDAC system is designed to be.

No amount of improvement in the PBDAC system will enable it to meet this new challenge. Only competitive market forces will bring about the necessary development in input availability at the farm level. Privatization of the input supply system and separation of input supply from provision of credit are equal prerequisites to accelerating agricultural development in Egypt.

A move away from reliance on input supply is essential for the development of PBDAC as a financial institution. Egyptian agriculture needs a strong banking institution to serve the critical financial intermediation function, transferring funds from savers to investors in the rural sector. It may be argued that this function should be in the private sector as well and, indeed, greater private participation in this function would be highly desirable.

The PBDAC network, however, occupies a niche in the Egyptian financial system that is not attractive to formal financial institutions, that is, making short-term production loans to farmers. Even PBDAC itself cannot operate profitably in this market at current interest rates (even commercial interest rates) without cross-subsidizing the operation from profits on the rest of its portfolio. Private lenders would not be willing to do this, at least not on the scale at which PBDAC currently operates. Over time, part of this credit function can be transferred to local input suppliers, for whom PBDAC would logically serve as a source of working and investment capital. This development is a long way off at present.

As the discussion of constraints to private sector development and to privatization of PBDAC should have made clear, privatization will not be an easy task. It is arguably the single most pressing need for agricultural development in Egypt, however, and consequently the rewards are worth the effort.

This section discusses an approach to privatization designed to be implemented as part of the proposed Agricultural Production Credit Project. Success in privatizing the input distribution functions now performed by PBDAC is as much dependent on reform of PBDAC's credit operations as it is on development of the private sector as such. Consequently, the approach discussed here assumes that the reforms presented in the companion report on credit are

implemented in parallel fashion with the privatization package. These reforms will not be discussed here, except to emphasize that privatization absolutely requires that credit and input supply be delinked without destroying PBDAC in the process.

The proposed approach to privatization stands consists of three basic components:

- a. Policy reforms to permit private trading in fertilizer, seed, and pesticide on a profitable basis;
- b. Testing of a variety of approaches to privatization of PBDAC's input supply system, focusing on the retail level; and
- c. Shifting of PBDAC contracting from public to private providers.

Each of these elements is further described below, following the discussion of the overall rationale for the program.

A. Program Rationale

The strategy underlying this program is based on that employed in the Small Farmer Production Project, to which the APC is a follow-on. The SFPP was designed in part to demonstrate the potential for major gains by changing small farmer credit policies, not through academic argument and analysis but through actually changing the policies in a limited area and observing the results. This strategy was successful: GOE leadership in the agricultural sector now accepts the idea that small farmers can and will pay rates of interest that were wholly out of the question before the project began, that collateral is not the only basis on which medium-term loans can be made, that small farmers can apply new technologies successfully, and that delegation of greater authority to Village Bank managers will not result in poor loan management.

The situation regarding privatization is parallel to that in small farmer credit seven years ago: privatization is opposed in part because of widespread beliefs that private sector suppliers will not perform acceptably. No amount of analysis or invocation of Samuelson will change these beliefs; it will be necessary to demonstrate in the field that:

1. Private suppliers operating in a competitive environment will not gouge the farmers;
2. Farmers can make responsible use of cash loans and do not need to have their input packages determined for them by the Ministry of Agriculture;
3. Farmers who borrow in cash will repay as readily as if they had borrowed in kind; and, most importantly,

4. A competitive market will do at least as good a job as PBDAC in getting the right inputs to the farmer on time and in good condition.

The strategy of the project is to demonstrate the validity of these propositions through carefully controlled and monitored experiments. Where experiments involve inputs that are now controlled, the district depot or shona will be used as a sort of buffer between the local level and higher levels. Some use of shona facilities is a practical requirement in any case, since there are no other storage facilities sufficiently large to handle inputs in the amounts that currently move through PBDAC. By partially privatizing at the shona level, the project can demonstrate that the system does not break down when retailers enter as intermediaries for the government or for private sector suppliers, while allowing the GOE to maintain substantial control over the quantities moving through the new channel and the prices faced by the farmer.

A second, equally vital part of the strategy is a policy transaction in which:

1. AID capitalizes the agricultural credit system in return for which
2. the GOE decontrols retail prices in agricultural inputs and permits private trade in fertilizer and most pesticides.

As argued in the credit report, the capitalization of PBDAC is necessary if the institution is to maintain financial viability. Capitalization will also underwrite the expansion of lending activity accompanying the transition of the SFPP approach from experimentation into implementation.

It must be emphasized that policy reforms in the input market cannot be separated from expansion of the SFPP approach. As discussed in Annex 3 to this report, the SFP Program is only viable on a larger scale if the private sector can supply the inputs needed for new technologies. In the SFPP, these inputs were supplied by the project, a practice that doubtless contributed to success at the pilot level but that is neither feasible nor desirable under an expanded SFPP. Direct provision of additional inputs by the project, the PBDAC, or the extension service is acceptable only on a limited pilot basis as part of extension demonstrations. Farmer access to credit should not be linked to acceptance of particular recommended practices, and certainly not to purchase of additional inputs from the project or PBDAC.

In consequence, expansion of credit serves no purpose if parallel measures are not implemented to free up access to inputs. As the discussion in Section II of this report demonstrates, changes in policies are a necessary and quite possibly a sufficient condition for private expansion in the input market.

The existence of a black market in fertilizer and the shortage of foreign exchange for importation of agricultural chemicals may make it necessary to use the dollar funds for one or both of the following purposes:

1. A CIP program for private importers of agricultural chemicals (assuming that AID environmental regulations do not block this activity); and/or
2. Importation of fertilizer in sufficient quantities to eliminate the black market, either in the country as a whole or in selected trial areas. (This point is further discussed in section V; for the moment, suffice it to say that elimination of the black market on an area basis appears to be feasible, but requires further study.)

Alternatively, dollar funding could be provided to the Ministry of Finance on a cash transfer basis in return for capitalization of PBDAC. A fourth alternative, pound capitalization using US-owned currencies or CIP reflows, should be used only if it would not undermine the policy reform process. As discussed in section V, these funds could nonetheless be used as an interim measure to prevent delays in the policy dialogue from blocking program implementation (or, equally important, to prevent the desire to move forward on the program from undercutting the policy dialogue).

It is difficult to determine how far the privatization process can proceed during an initial 5-7 year period. The project could not be regarded as a success if it did not move beyond the experimental stage by the end of this period, however. Although this issue must clearly be explored much more fully with the GOE during design, a reasonable target for end-of-project status might be framed as:

1. Open access to traders in all shonas in at least one governorate, and possibly three governorates, with sale of both PBDAC-owned stocks and private goods on consignment on a demand basis (i.e., unlimited); and
2. A 25 percent reduction in the volume flowing through the PBDAC system in that governorate (or governorates).

It may be noted that credit for traders is not part of the proposed strategy. Larger traders do not need credit from PBDAC and smaller traders do not appear to want it. This point deserves further exploration during design.

An important caveat to this point is the need to prevent the spread of in-kind credit to the retailer level. If it is decided to make credit available to village traders, this activity should be handled as part of the regular credit portfolio in the Village Banks, not as a special activity linked to the opening of the shonas to traders or to placement of goods on consignment. It would be an error to replace in-kind credit to farmers with in-kind credit to retailers or to interpose PBDAC between wholesalers and retailers in

the same way that it now stands between input producers and the farmer. Besides giving PBDAC too much control over the development of its competition, a move in this direction would undermine the necessary separation between PBDAC's credit and input activities.

B. Key Policy Reforms

Reforms in key policies tying the hands of the private sector are even more important than PBDAC reform in making privatization possible. It cannot be overemphasized that most of these reforms must be made at levels above the agricultural sector. They involve both technical ministries in other sectors (Supply and Industry, in particular) and most of the central ministries (Finance, Trade, Economy, and Planning, at a minimum). In some cases, such as in the removal of retail price controls on agricultural inputs, it can be expected that approval will be needed at the most senior levels of government.

Obtaining approval to this package of reforms will not be easy. Indeed, it may not be possible at all. Privatization depends on these changes, however, and the mission should not go forward along this avenue unless sufficient resources can be mobilized to carry the dialogue through to completion.

The key reforms, in order of importance, may be summarized as follows:

1. Remove retail price controls on imported and domestically produced inputs;
2. Permit private trading in fertilizer and at least some cotton chemicals, at least in trial governorates;
3. Reduce tariffs on agricultural chemicals in any form to no more than 10%;

Reform in agricultural input subsidies is conspicuous in its absence from this list. It is to be hoped that the mission will continue its support for reform in this area, but progress on this front should not be linked to privatization. Government support for private sector growth is far too weak a reed to bear the pressure of massive agricultural sector reforms.

Experience in other countries (notably Bangladesh) demonstrates that privatization can be implemented at the retail level in the presence of input subsidies, as long as sufficient supplies of subsidized commodities are made available to ensure smooth functioning of the market. Further analysis is necessary to determine whether it is preferable to increase the price so the market will clear at the current quantity, to increase the quantity so that the market will clear at the subsidized price, or to increase both price and quantity an intermediate amount (in effect, spreading the current subsidy across a greater volume of input).

C. Testing of Privatization at the Retail Level

As discussed in section IV of this report, there are many promising approaches to privatization that could be tested through the new project. Some of these will prove unworkable for one reason or another, either during design or during implementation. For this reasons, the mission should not limit the scope of this experimentation except as such limitation is necessary to avoid overly complicating the design. On the contrary, a number of small experiments, closely monitored as the basis for building on successes, would be preferable to a single large failure.

To the extent possible, several approaches should be tried at once, so that retailers attracted by one or another approach may also be induced over time to try others, thus increasing the chances of success overall. For example, by allowing private wholesalers to use the shonas as distribution points, the project can encourage local retailers picking up purchases there to buy from PBDAC at the same time.

One of the main issues to be addressed in designing such a testing program is the question of scale. To achieve their purpose, the tests must be of sufficient scale to create a real opportunity to which the private sector can respond. A test restricted to a few villages, for example, may not provide a market large enough to induce the private sector to respond. At the same time, PBDAC receptivity to large-scale tests is clearly limited.

The remainder of this section discusses one possible approach to dealing with this issue and lays out an indicative schedule. Based on discussions held by the team, this approach appears to be the most promising one available to the mission. It is too early in the process to make a definitive determination of feasibility, however, and the acceptability of this approach as well as others should be fully explored during design in discussions with the local business community, PBDAC, and other GOE officials.

The recommended approach is to select a single governorate as a test site for a range of privatization approaches. The governorate should be selected based on:

1. Receptivity of governorate leadership and BDAC officials;
2. Current market activity and potential for greater free market development; and
3. Absence of cotton acreage.

Mandatory cotton rotations currently are in place in all governorates except Qalyubia and Giza in the Delta and Aswan and Qena (and possibly Sohag) in Upper Egypt. Qalyubia, one of the three initial SFPP governorates, thus emerges as a promising candidate for a privatization test. Final determination must be based on discussions with the GOE.

Tests of privatization approaches should be concentrated in this governorate during at least the initial three or four years of the project, in order to allow the private sector sufficient time to respond to the new opportunities presented under the project. If tests are successful, the most promising techniques might then be expanded to a second governorate. Aswan, a non-cotton governorate, may be an appropriate candidate for two reasons:

1. Testing in an Upper Egyptian governorate would be desirable to explore privatization under the different conditions prevailing in that region; and
2. Aswan will be in the market area for the proposed new fertilizer plan, thus giving it priority in development of private sector marketing systems for fertilizer and other inputs.

Limiting the test sites to a single governorate should facilitate implementation by reducing the number of individuals who must approve and participate in the tests at the management levels of the BDAC. Significant resistance to privatization can be expected at this level, even if the experiments are actively supported by central PBDAC management and other senior levels of the GOE. Grouping the test sites will also encourage importers and wholesalers to participate actively in the tests, because of economies of scale in serving a single consolidated test area, compared to many isolated sites, and because it will be easier for them to deal with a single BDAC management structure than with several different governorate banks.

1. Indicative Schedule

At this point in the design of a test program, it is premature to specify a detailed schedule for implementing the initial tests or expanding them to larger areas. This section and the following sections must therefore be regarded as indicative of the level of accomplishments that should be sought during the initial five years of the program, rather than as landmarks in the implementation of a specific program.

- Year 1: Reach agreement with BDAC management on the specifics of the initial testing program in the test governorate, including the rates to be charged private suppliers using BDAC facilities, prices to be charged at the wholesale level by the BDAC, participation of BDAC staff at the shona, etc.
- Year 2: Implement at least one pilot activity in each of three shonas in the governorate.
- Year 3: Expand promising pilots to half of the remaining shonas in the governorate.

- Year 4: Expand promising pilots to remaining shonas in the governorate and begin reducing the level of services in mandubiyas (e.g., by reducing hours and volumes available).
- Year 5: Continue phasing out mandubiya activity, with the aim of reducing mandubiya "sales" volume by 25 percent by the end of Year 5. Plan and begin implementing successful approaches in at least one additional governorate.

At each stage, the program must be monitored closely by PBDAC and the MOA, with the assistance of the technical assistance team. Evaluations of progress will be necessary at least annually, and probably after each agricultural season.

2. Inputs to the Testing Program

Properly implemented, the testing program should have no net cost to the BDAC. Services to private traders (e.g., use of the shona as an intermediate distribution point) should be based on a fee-for-services basis that covers BDAC costs. Physical changes in BDAC facilities, if needed at all, should be minor (e.g., construction of a fenced enclosure to separate private goods on consignment from PBDAC goods).

Limited training of shona staff may be required, depending on the design of the specific tests. PBDAC does not have a shortage of accountants and goods clerks with the skills needed to issue goods against payment, and in most cases these functions could be performed by existing shona staff.

The main cost associated with the pilot test activity will therefore be the provision of an advisor to assist PBDAC in developing and monitoring the test activities. Given the resistance expected at all levels of PBDAC, it is desirable to field a full-time individual, whose main responsibility will be to facilitate the test process in any way necessary. The long-term advisor should be experienced in agricultural input supply and should have strong interpersonal skills. In addition, it may be desirable to provide TDY assistance to PBDAC in evaluating the experience (e.g., monitoring changes in prices and input availability at the farm level).

It is not anticipated that additional credit or other direct assistance to the private sector will be necessary or appropriate during the pilot phase. This assumption should be reexamined during both design and implementation, with the aim of identifying measures needed to move beyond the testing phase.

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3. Dealing with the Black Market

Orderly implementation of the testing program will require that black markets in agricultural inputs be eliminated, at least in the pilot test areas. This can only be done by bringing the quantity demanded into line with the quantity supplied, by adjusting the price, the quantity available, or both.

Ideally, it would be desirable to eliminate the black markets in the major inputs (cotton pesticides and fertilizer, in particular) on a nationwide basis to clear the way for the privatization process. Assuming that the possibility of major price movements in these inputs is remote, at least in the short term, the most feasible approach is to import sufficient quantities to meet demand at the subsidized price. On a nationwide basis, this would probably be fairly expensive (up to \$100 million annually for fertilizer alone, based on a black market price 50% above the subsidized price and a unitary price elasticity).

Alternatively, it may be possible to eliminate the black market in a particular region by raising the price in that region to a price between the black market price and the subsidized price and making an unlimited quantity available at that price. The differential between the black market price in adjoining regions and the new price in the test region would have to be sufficiently small so that transport costs would restrict the outflow of the commodity to adjacent regions. The feasibility of this approach of course depends in part on geography: it would be much easier to apply in a single governorate, such as Qalyubia, than in a number of isolated sites, where leakage to adjacent areas could make it difficult to monitor the program.

The implications for farm-level production and incomes of such an approach would depend on how much fertilizer is currently being purchased on the black market and by the size of the price increase, relative to the subsidized price. If the black market is a minor factor (unlikely in Qalyubia, given the large vegetable acreage), greater farmer resistance can be expected than if the contrary is true.

D. Privatization of PBDAC Procurement

This option is straightforward and, setting aside the foreign exchange rate issue, does not pose major practical problems. The primary barriers will be political, related to loss of business in public import and transport firms.

The main advantage to be gained through a shift of PBDAC to private sources is an expansion of the total volume of agricultural chemicals handled by private importers. The longstanding public monopoly in procurement of major inputs and in transporting them to district distribution points has cut the private sector out of a very large and lucrative business. Rapid reestablishment of international contacts, expertise in procurement, and expansion of

the private truck fleet would all be given a substantial boost by transfer of this trade to the private sector.

This element of the program is the least important of the three, however. As the private sector grows and PBDAC trading declines, the volume of sales in these channels will decline automatically. This element could be dropped, if necessary, and should be sacrificed without regret for real gains in either of the other two areas.

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V. AID Programming Considerations

A fundamental point made in the foregoing discussion is that privatization will not be a quick or simple process. A clear corollary to this is that development of an AID program that moves this process forward will also be a difficult task. Effective privatization cannot be achieved with the current policy set, even though the government's overall strategy favors private sector growth. Achieving these changes must be an integral part of AID's own strategy for the development of the credit and input sector.

If AID moves quickly, it may be in a position to begin implementation of a credit and input program by obligating funds this fiscal year (FY1986). It is not, however, realistic to expect that the policy changes and program development activities needed even for pilot privatization of PBDAC trading (or for internal bank reform) will be in place by that date. On the contrary, that time frame does not permit them to be defined by AID and the GOE, much less accepted by the Government with sufficient rigor to justify obligating large amounts of funds (e.g., to capitalize PBDAC).

This section lays out the steps that will be necessary to reach that point as part of a longer process of PBDAC reform. At each step, the main issues have been identified and a preliminary recommendation made to resolve them. These recommendations should be viewed as quick and dirty, at best; they are intended to assist the mission in framing the issues and making a decision.

It cannot be overemphasized that the policy reforms needed cannot be achieved at the sectoral level. Some of the most critical changes will require approval at the highest levels of the GOE. Achieving these changes will require a concerted effort on the part of AID, involving not only the office ultimately responsible for the project but program and senior management personnel as well as support from the Embassy. If these resources cannot be committed to the effort, for whatever reason, the mission must recognize that it cannot proceed to design and implement the program outlined above. Limited experimentation with privatization at the local level could go forward, but the project's contribution to achievement of actual privatization would be extremely limited.

The design process must proceed on three separate tracks:

- a. SFPP expansion: Given the experience to date with the SFPP and the GOE's own expansion, the design of an expanded version of SFPP (covering, say, all of 3 governorates and parts of 2-4 other governorates) does not pose major difficulties.
- b. Bank reform: Depending on the magnitude of the changes envisioned to make the PBDAC a "real bank," design of this program may be straightforward (e.g., to design training and management reforms) or very complex (e.g., to establish the BDACs as autonomous units, change the

rules governing PBDAC's ability to retain earnings, or alter agricultural interest rates).

- c. Privatization: The main tasks required in this area are analysis and dialogue to achieve policy change, rather than design as such.

This section focuses on the third track, with reference to activities in the other areas as they affect progress in privatization. Program development can be divided into three phases: actions leading up to initial obligation; actions leading up to major obligation of funds; and later actions. Key issues in each phase are highlighted.

A. Actions Leading up to Initial Obligation

In order to proceed with initial obligation, AID must complete several actions:

1. Obtain a GOE commitment to privatization of PBDAC input distribution over a ten-year period.
2. Engage the GOE in a dialogue on eliminating price controls, state monopolies, and other impediments to private sector distribution;
3. Decide whether reform in input and output prices will be an expected output of this dialogue;
4. Generate the analysis and information needed to proceed with this dialogue; and
5. Determine that sufficient probability of success in this dialogue exists to warrant continuing the process;

It appears that action in all of these areas is in a very preliminary stage at best.

Issue: Should the mission plan to obligate in FY1986?

Recommendation: The mission should obligate initial funds for the non-capital elements of the SFPP expansion and PBDAC reform if the five actions outlined above are completed. Experience with the SAS/NAP/NARP underscores the danger of allowing design to drag on for years without at least a "good faith" obligation. By failing to obligate in FY86, the mission risks losing the considerable momentum generated by SFPP and thus forfeiting the real progress made in PBDAC.

Issue: Will an initial obligation generate irresistible pressures to continue the process, particularly in view of the need for SFPP loan capital, thus undermining AID's ability to withhold funds if policy changes do not materialize?

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Recommendation: Use local currency to fund initial loan capital requirements, preferably by loaning them on short maturity to PBDAC, but withhold dollar capitalization until price controls and public monopolies are removed.

B. Actions Leading up to the First Major Obligation

Prior to providing funds for a major infusion of capital to PBDAC, a CIP program for private traders, or other uses connected with this program, AID requires the following:

1. Pilot privatization designs approved by MOA and the PBDAC for field testing; and
2. Legal and regulatory changes permitting profitable private trading operations at the import, wholesale, and retail levels.

The approaches outlined in this report clearly need further development and discussion with MOA and PBDAC officials at several levels before they are ready for testing. Given the fact that these discussions have not begun on any level, it is unrealistic to expect them to be completed satisfactorily by September 1986. Mid-1987, however, is a reasonable target date, and would permit the first dollar funds beyond TA and training to be provided within a reasonable time-frame. Since technical assistance under the new project would not begin before mid-1987, when the existing TA effort will terminate, no barriers to project implementation would be posed by delaying the availability of loanable funds until that date.

The feasibility of obtaining the legal and regulatory changes cannot be assessed without further discussions with the GOE at several levels. Given the specific issues involved in each commodity group, the feasibility of obtaining a blanket lifting of price and import controls is much less lower than that associated with partial decontrol. The central issues to be resolved is: how much less than full decontrol will AID accept to begin the process?

Issue: Can CPs be used instead of delayed obligation to obtain the same result?

Recommendation: Experience with obtaining real policy change with CPs is, in a word, disheartening. Only obligation commands sufficient attention within AID and the host government to exert even a semblance of pressure.

Issue: Is fertilizer price reform necessary for privatization?

Recommendation: AID can and should separate these two issues. Moving fertilizers to world price levels will not be achieved by September 1987. Privatization experiments can proceed by: a) ensuring sufficient fertilizer is available in the country as a whole or in pilot test areas by importing it and selling it at the agreed upon price (if the test area approach is chosen, the price

must be sufficiently close to the black market price in adjacent areas to keep the fertilizer within the test area, more or less; this price is currently a fraction of the world price).

Issue: Does AID have sufficient resources to eliminate the fertilizer shortfall nationwide at the subsidized price?

Recommendation: AID should begin analysis immediately to obtain the information needed to resolve this issue. This will require an analysis of demand for fertilizer, prices and quantities on the black market, and the drop in demand associated with various degrees of price movement, with and without changes in controlled output prices. This analysis must also address the impact on production and farmer incomes of such price changes, if tests of higher prices will be made under the project. It should also examine the change in output prices (including uncontrolled products) associated with a change in fertilizer price and availability under different scenarios. Preliminary analysis indicates that, at the current price, the fertilizer import requirement to clear the black market nationally could be as much as \$60-100 million annually.

Issue: Is privatization feasible if fertilizer is excluded in whole or in part from the program?

Recommendation: Although AID should consider accepting a compromise in which fertilizer was not reformed at the macro level (i.e., trading remained a state monopoly in most areas), it should not agree to exclude fertilizer from the pilot test areas. As noted above, this implies that the price of fertilizer for private traders and possibly for PBDAC as well would have to be raised close to the black market price in these areas, to contain the additional supplies provided.

Issue: Is AID willing to exclude cotton, particularly cotton pesticides from market decontrol?

Recommendation: Although further analysis of this point is needed, it appears that AID could compromise on this point without gutting private sector participation in pesticides. Although the excluded pesticides include some items where potential demand is very strong, cotton is such a blind spot for the GOE that this point may have to be conceded if any progress is to be made. The same point probably applies to PBDAC in-kind loans and every other aspect of input supply touching cotton.

C. Actions Leading up to Later Disbursements

The mission has not yet determined what it defines as "success" in the privatization area. This "internal policy dialogue" should be completed as soon as possible, preferably by Spring 1986 if the mission intends to proceed to an FY86 obligation. Without knowing what one is asking for it is difficult to determine whether the other side has conceded. The basic rules of haggling apply: one

can reduce the concessions requested but not increase them once bargaining begins; once an offer has been accepted, it cannot be retracted by the offeror, etc.

Issue: Is this a five-year, seven-year, or ten-year project?

Recommendation: The privatization process and the institutional reforms that must accompany it throughout the PBDAC and MOA system will require a minimum of ten years. Nonetheless, AID would be unwise to enter into a ten-year commitment, even unfunded, without a much stronger indication that the GOE is willing to undertake a meaningful privatization of PBDAC input operations.

Issue: Is privatization at the margin (i.e., allowing current input quantities to remain in public channels but additional growth to be wholly private) enough?

Recommendation: The mission should not accept this as the end of project status. The private sector cannot achieve enough volume for rapid growth without cutting into PBDAC volume, nor will PBDAC ever take the difficult steps needed to become a financial institution unless it is forced to do so by actual loss of revenue from trading. Moreover, the potential for expansion in commercial inputs is not unbounded in Egypt. On the contrary, improvements in technology (e.g., seed drills, better water management or fertilizer placement) may actually lead to reduced tonnages of inputs being used in the future rather than the contrary.

Issue: To what extent should the mission expect PBDAC to withdraw from commercial trading by the end of the project?

Recommendation: The answer clearly depends on whether this is a five- or ten-year project. A good target for the end of an initial five year period would be private trading from all depots in at least one governorate, with a reduction of PBDAC agency volume of 25-50% and effective closing of perhaps 10% of the agencies (e.g., reduction of the total number of agency-days by shifting half of the agencies to a four-day week).

Issue: Is AID willing to subsidize public sector companies that make losses as a result of privatization?

Recommendation: The dangers of this measure are clear, and AID should avoid this if at all possible. The main candidate for losses is the seed industry, to which AID and other donors have already provided a more than generous subsidy under the various research projects, albeit unintentionally.

Issue: Is AID willing to subsidize pesticide imports in order to privatize importation (replacing an implicit foreign exchange rate subsidy with an explicit subsidy via CIP or local currency transfers)?

Recommendation: Privatization of PBDAC international procurement will require one or both of these measures if pes

prices are not to double overnight. This is a difficult issue, but privatization may be more important than pesticide pricing, especially if this is the only way to get cotton pesticide procurement privatized.

Issue: Is AID willing to provide funding (presumably local currency) to support reduction of PBDAC staff levels, if necessary?

Recommendation: Experience worldwide in privatization indicates that personnel issues are the most important and intractable problems during implementation. At some point it may be necessary to provide funds for one-time payments to current PBDAC employees as the only means of reducing staff. This measure, although a departure from standard AID practice, may be warranted in this case. This issue should not arise during the first five-year period, however.



A DESCRIPTION OF PBDAC'S ROLE IN THE AGRICULTURAL CONTROL SYSTEM

PBDAC is an integral element of the agricultural control system, as a brief description of that system will make clear. Consequently, privatization of PBDAC input supply functions cannot be separated from at least partial reform of the control system.

The agricultural control system has three main elements:

1. Control on cropping patterns;
2. Control on input use and availability; and
3. Control on marketing.

The system is directed toward ensuring a minimum supply of certain basic commodities: cotton, wheat, rice, and, to a lesser degree, certain other staples such as onions and lentils. From the standpoint of the GOE, supply does not mean total production or even marketable surplus, but supply with a capital "S": entry of the appropriate commodities into government marketing channels.

This is not a semantic difference; on the contrary, it is key to differentiate between the current policy set, which is designed to ensure supply to government outlets, and an alternative policy set designed to promote production or lower consumer expenditures on major commodities. Indeed, a recent analysis of rice marketing concluded that the current system may actually reduce marketed surplus (de Janvry, et al., 1983?).

1. Control of the Cropping Pattern

Control of the cropping pattern is limited to required maxima or minima in certain crops (basically, cotton, rice and wheat). Control is exercised through the "block" system, under which certain areas are set aside for the controlled crops. The blocks are rotated through the agricultural area in line with established two- or three-year rotation patterns. Thus, the various blocks in a village rotate between cotton, say, and other uses. When a given block is scheduled for cotton, any farmers whose land falls within a given block must plant cotton. Since technical factors limit the crops that can be grown before and after the controlled crops, the impact of the control system extends far beyond the acreage actually affected.

The block system is a technical measure as well as a system of control. Blocking of cotton is necessary to facilitate crop spraying, for example. Farmers would prefer to

grow more rice than permitted under the control system, but the water is not available. Thus the control system serves the role that would normally be played by prices in allocating scarce inputs (such as irrigation water during the peak rice season).

The block system is implemented by the Ministry of Agriculture through the national cooperative system, with support from PBDAC. In outline, the procedure is as follows:

- a. Each year, targets for each of the controlled crops are set at the national level by a committee reportedly chaired by the Minister of Agriculture.
- b. These targets are translated into governorate, district, and ultimately village targets, which are communicated to the cooperative manager in each village.
- c. The cooperative manager assigns blocks to the controlled crops to meet the target, and submits a map showing the proposed rotation. Depending on local conditions, the rotation may fall short of the proposed target.
- d. The proposed rotations are aggregated back up the system to form the official rotation, which forms the basis for allocating seed, fertilizer, etc., to each village.

The cooperative manager provides the Village Bank with a list of farmers, showing the acreage to be planted to each controlled crop.

It is also the cooperative manager, not the extension agent as such, who is responsible for policing the rotation and assigning fines to violators. Although the extension agent belongs officially to another system entirely, and thus is not involved in policing the rotation, this is not readily apparent at the local level. Both agents work out of the same physical facility, where the Village Bank mandubiya is almost invariably located as well. It is not surprising that the farmers think of the bank, the cooperative, and the extension system as a single system.

2. Control of Input Use and Availability

The official rotation is translated at the national and local level into approved allotments of various inputs. At the national level, the Ministry of Agriculture translates the national rotation into tons of seed, fertilizer, etc., and instructs PBDAC to procure and distribute these quantities.

At the local level, the cooperative-supplied information on the village rotation is translated into planned allocations

for each farmer by Village Bank personnel. Shipments of appropriate quantities are then coordinated among the various levels of the Bank with the aim of ensuring that the planned quantities are available in each mandubiya according to their scheduled use.

The individual farmer then picks up his allotment of inputs, a transaction recorded on his "agricultural card" (actually a booklet) and ultimately entered against his name in the Village Bank.

In theory, the farmer may purchase additional quantities of fertilizer, etc., for cash at an unsubsidized price. In fact, additional supplies are rarely available. In Gharbia, for example, the commercial manager estimated that perhaps fifty such transactions had taken place the previous year in the entire governorate.

It is difficult to determine the extent to which the availability of inputs at the village level fully covers the official allocations for the non-controlled crops. In any case, most farmers appear to regard these allocations as insufficient, and often supplement their allotment with black market purchases, particularly for maize and vegetable crops.

3. Control over Crop Marketing

Marketing of the controlled crops is also a joint operation between PBDAC and the cooperative system. Each season, the cooperative and the Village Bank set up receiving points for collecting the controlled crops from the farmers. The produce (including grain for seed produced by private growers for the parastatal seed system) is graded, weighed, and so on at these collection points. The farmers are then paid, deducting outstanding loans.

Depending on the crop, PBDAC may serve as an agent for the cooperative or as an agent for another governmental unit, collecting a commission in both cases. Typically, the controlled crops remain under the cooperative system while the other quota crops (onions, etc.) are purchased by PBDAC for the Ministry of Supply. PBDAC loses money on the cooperative marketing, which will officially be carried out by the cooperatives rather than PBDAC in the future, but realizes a nice profit on the Supply operations.

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THE CURRENT SYSTEM FOR TECHNICAL AND PRICE
REGULATION OF AGRICULTURAL INPUTS

This annex describes the current system for regulating production, importation, and sale of agricultural inputs in Egypt. Pesticides will be used as an example, since the system for seeds has been fully described in the report on the seeds industry prepared under the Data Collection and Analysis Project. Moreover, since fertilizer importation and trade is prohibited, the regulatory system is not an issue in fertilizer trade at this time (the basic system is similar in broad outline for all inputs, however).

The Egyptian system for regulating inputs is based on the following operating principles:

1. Regulation is on a case-by-case basis; and
2. Regulation is ex ante rather than ex post.

In other words, a company wishing to import, produce, or sell pesticide locally must gain approval for each type of pesticide in advance of beginning operation. Even if the pesticide is already produced and marketed locally (e.g., malathion), or is widely accepted internationally, the same approval process must be followed.

The approval process has both a technical and an economic aspect. Potential chemicals are vetted not only for their effectiveness and potential hazard in Egypt, but also as to the price at which they may be sold (and often as to the total quantity that may be imported). The technical control system is straightforward, although cumbersome. The economic control system is a far more serious barrier to expansion of private input activities.

Regulation of pesticides is the responsibility of the Ministry of Agriculture, particularly the Division for Plant Protection. Numerous other government units are involved at different stages of the process, including the Ministry of Industry, the Agricultural Research Center, the Ministry of Trade, and so on. The procedures differ depending on whether the firm in question intends to import the chemical, produce it locally, or simply engage in trade in the commodity.

1. Approval to Import

The first step in gaining approval to import is through application to the MOA Plant Protection Division. The application must be approved by the Pesticide Committee and the Recommendation Committee, both in MOA, leading to final approval

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by the Ministry's Committee for Setting Private Sector Requirements (Lagnat Tadbir Ihtayagat el-Qita' el-Khas)', which is chaired by an MOA first undersecretary. The Pesticide Committee reviews the application on technical grounds, measuring the proposed chemical and its use against WHO standards. According to officials contacted, Egypt is generally somewhat stricter than WHO standards, because of the lack of internal controls against misuse. It should be noted, however, that some highly hazardous chemicals are currently being imported. Gramaxone (paraquat), for example, is a registered pesticide in the United States (i.e., restricted access), but is approved for use in Egypt.

Once the initial application passes the Pesticide Committee, it is approved for field trials under the jurisdiction of the Recommendation Committee. Currently, approximately 250 pesticides are under trial, compared to 175 approved for use. 47 companies are currently importing pesticides or applying to do so.

In principle, application can be made to import any type of pesticide. An important exception is any pesticide approved for use on cotton. Importation of these pesticides is a government monopoly and applications to import them for other uses will be (and have been) automatically disapproved. This is not a trivial limitation, since the prohibited list currently includes several basic chemicals, such as Sevin, with potentially broad application in Egypt. Moreover, the list can be amended at any time, eliminating previously profitable product lines overnight. Information is not available on the number of applications that are refused at one point or another in the review process, nor on the number of chemicals currently at each stage in the process.

The testing process takes a minimum of three years, as testing moves from small trials to check plots to large-scale trials (200 feddans nationwide), all on national research station land. If satisfactory results are obtained, approval is granted for "semi-commercial" imports. This allows the importer to bring in sufficient quantities for up to 30,000 feddans at the rate of application recommended by the committee.

It should be noted that approval is crop by crop, not chemical by chemical. In other words, separate testing and approval is required for each crop and approval to import a given pesticide for use on, say, tomatoes, does not constitute approval to import it for use on green peppers.

If results continue to be satisfactory, full commercial status is granted the following year. Officially, commercial status allows the importer to import only the quantity "needed" in Egypt, based on the application rates recommended by the committee and approvals that have already been granted for other pesticides for the same purpose. In other words, the system in theory ensures that competition between two chemicals for the

same use does not arise. In practice, it appears that importers are sometimes allowed to bring in as much as they wish, assuming they are providing the foreign exchange. Nonetheless, each time a new letter of credit is to be opened for importation, a new approval by the committee is required. The Private Sector Requirements Committee also reviews the proposed import price, to ensure that it is "appropriate."

The Pesticide and Recommendation Committees also exert some control over packaging and other marketing features. For example, they are attempting to standardize pesticide containers so that all poisons are in red containers and all non-toxic chemicals are in blue containers. While the need for clear marking on potentially toxic chemicals is clear, this regulation may pose difficulties for importers wishing to establish brand recognition or for illiterate farmers trying to distinguish among different products.

The testing process is variously estimated to cost LE 1500-3000, if testing is limited to a single crop. Once a firm has passed the technical hurdles, importation can begin, subject to the economic regulation system. This system imposes a maximum mark-up in the form of a maximum retail price that is determined at the time of application to import.

The pricing system is regulated by a separate committee in the Plant Protection Division, the Pricing Committee (Lagnat it-Tasa'ira). This committee includes representatives from the Office of Marketing (now the Office of Finance) in the MOA Undersecretariat for Agricultural Economics and PBDAC as well as Plant Protection. This committee assigns the maximum retail price on the basis of a formula that is in turn based on the CIF price. This formula allows a maximum retail price of 146% of the CIF price, with the latter calculated at the .84 ("incentive") exchange rate.

The CIF price must be supported with actual invoices; thus the importer cannot be sure of the price at which the good may be sold until it has actually been imported and the documents processed by the committee. Some observers report that tariffs and other charges may be included in the base import price, but others indicated this is not the case.

Everyone in the system is aware that this formula does not permit importers to cover their import costs as they must purchase foreign exchange at 1.80. A shift in the formula to the 1.35 rate is under discussion, but has not been implemented to date.

The 46% allowance for in-country marketing costs is determined on the basis of calculations by PBDAC. Observers agreed that an initiative to change this procedure would normally be initiated within PBDAC but that final approval would be required from one or more of the High Councils (e.g., for Trade, Agriculture, etc.). This approval is not automatic;

indeed PBDAC itself has applied several times for an increase in its seed commission, which is frozen at a meager LE 0.50 per ardeb, but permission has not been granted.

It is unclear whether the price can be changed to reflect an increased cost in later shipments, once the price is set by the committee process. This point requires further confirmation. At this time, the basic formula makes imports impossible, with the predictable result that importation has fallen dramatically in recent months, according to participants in the market. One joint venture company reported that sales volume had declined more than 30 percent between 1984 and 1985, as the result of the inability to change prices when import costs and duties rose.

The system itself adds an unwelcome element of risk to investment and trade in agricultural inputs. Last year, for example, a 43% duty was added without notice to imports in packages of less than 25 kg. A major manufacturer was caught in the middle of a large shipment by this new tariff and forced to absorb a significant loss, as the retail price could not be changed to reflect the new regulation. Changes of this sort are frequent and constitute a serious problem for the private sector.

2. Permission to Manufacture Locally

Firms proposing to manufacture or formulate chemicals locally (i.e., manufacture from imported constituents) must follow a similar procedure on the technical side.

Approval to begin manufacture typically requires approval from the Ministry of Industry. MOI approval is not routine. On the contrary, one applicant (in agricultural machinery, not pesticides) reported that approval took six months and another applicant (also in agricultural machinery) reported that several applications have been disapproved because the product would compete with a public sector manufacturer, even though the particular item is currently imported in reasonably large numbers and the proposed factory would have had a higher percentage of domestic value-added than the public sector product.

There are many points in the process where public sector firms or influential private firms can block potential competitors. For example, the regulations limiting construction on agricultural land have recently been tightened, and approval from the Minister of Agriculture is no longer routine. At least one application to manufacture agricultural inputs is stuck behind this barrier. The potential for collusion in restraint of trade and other corrupt practices should be readily apparent.

3. Control of Domestic Trade

In contrast to the strict controls affecting importation and manufacture, controls on the wholesale and retail level are relatively lax (excluding price controls). In theory, an individual proposing to deal in pesticides must have a B.Sc. in an appropriate field (agriculture, not commerce), but this requirement is easily circumvented, given the surplus of B.Sc.'s on the market. As a practical matter, village-level outlets are not subject even to this requirement.

Controls on labeling, packaging, and handling, if any, are not effective. Pesticides were observed in the field being sold in unmarked plastic bags, twists of scrap-paper, and other unsuitable containers. The extent of health hazard imposed by this practice is not known, since most of the chemical sales observed involved chemicals with low toxicity, such as sulphates.

GOE capacity to monitor such misuse in the field is extremely limited. Several observers of the pesticide situation expressed concern that toxic levels of some chemicals (e.g., nitrates) may be reaching dangerous proportions in the soil in some parts of the Delta, leading to a human health hazard through contamination of agricultural products. Although this situation has been brought to the attention of Egyptian authorities by individuals within the system as well as by outsiders, no action has been taken. Extension agent training in pesticide use and in monitoring side effects is effectively nil, a factor that will become more critical as chemical use moves away from strict, centrally-determined formulae and toward greater freedom for farmer selection and management of chemicals.

The safety factor should be examined further during APC design and methods developed to address the problem consistent with privatization of input distribution. In this connection, it should be noted that the procedures outlined for the NAP (but never applied because of the scaling down of the extension component) are completely inapplicable under private sector management. Wholesalers taking advantage of a CIP facility have no means of specifying how the containers will be disposed of several steps down in the marketing chain, for example.

The regulatory system outlined above constitutes a major barrier to development of the retail network, even though it is focused almost entirely at higher levels of the system. Naturally, private trade is impossible if a given chemical cannot be legally imported or manufactured. The policies and procedures discussed above severely constrain both importation and domestic manufacture, and thus choke off the development of the retail network. Coupled with large subsidized sales through public sector channels, this system virtually ensures that the network of private rural outlets will never reach adolescence, let alone maturity. Efforts directed to developing this system without confronting the real constraints at the importer/manufacturer level will not succeed.

ANNEX 3

ISSUES IN THE EXPANSION OF THE SFPP MODEL

The fundamental point demonstrated by the Small Farmer Project is that farmers can increase output given access to credit and improved technology, and they are willing to pay for this opportunity. The farm-level approaches developed in SFPP deserve AID support for application on a larger scale.

Two features of the SFPP approach, however, should not be replicated in an expanded credit project:

- a. The emphasis on strictly supervised credit, whereby farmer access to inputs and credit was tied directly to acceptance of project-determined packages. Packages should continue to be used as an extension approach, with farmer application on a voluntary basis, but should be delinked from credit.
- b. The direct provision of inputs to the farmers should not be continued. This approach is simply an "improved" version of the current in-kind credit system and, if continued, would block expansion of private trade, overburden the extension service, and undermine the separation of credit and input supply.

This raises a fundamental issue that must be addressed before supplying major support to an expanded SFPP: where will the farmers get new and/or additional inputs? It would be a grave mistake to continue to supply inputs to the farmers directly from the project (as in the SFPP) or to provide them via the extension service (as in the GOE's expansion program). They must, therefore, be supplied through the private sector.

This issue is separate from testing privatization of PBDAC input supply on a trial basis. These tests can and should go forward, but they will necessarily be limited to a much smaller area than should be included in the proposed expansion. Whether or not the tests are ultimately successful, they do not provide a short-term solution to input supply in the expansion.

The success of the expansion will therefore depend in part on the ability of the private sector to respond to the new market opportunities created by the extension and credit activities. Private sector ability to do so is at present seriously constrained by policies that make profitable operation impossible within the law (notably controls on retail prices and importation).

Change in these policies is therefore a prerequisite to successful expansion of the SFPP model on a large scale. Direct promotion of private commercial activities by the project (e.g., a credit scheme) cannot substitute for these policy changes. In other words, SFPP cannot be expanded successfully unless the regulations governing private trade are reformed, at the very least, in those governorates where SFPP will operate.